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THE PLANT DISEASE REPORTER

ISSUED BY THE OFFICE OF MYCOLOGY AND DISEASE SURVEY

Volume XI Number 14

November 15, 1927

BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

THE PLANT DISEASE REPORTER

Issued by

THE OFFICE OF MYCOLOGY AND DISEASE SURVEY

Volume XI November 15, 1927 Number 14

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W. A. Archer, Assistant Pathologist, Ames, Iowa.

COLLABORATORS

(as of November 1, 1927)

° = Chief Collaborator
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Georgia			W. J. Morse	Orono
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Porto Rico	
Mel. T. Cook	Rio Piedras
M. F. Barrus	Rio Piedras
Egypt	
L. E. Melchers	Cairo

ANNUAL SURVEY REPORT

On November 4 there was forwarded to the chief collaborators of each state a request for the annual plant disease survey report. As usual this report calls for information concerning the prevalence, importance, losses, distribution, earliest appearance, weather relations, etc., of plant diseases in 1927, with notes on any other subjects, such as varietal susceptibility, control measures, and unusual observations. All collaborators have been asked to cooperate with the chief collaborators in the preparation of this report. Also, all readers of this Reporter who have information that they think will be of value in this connection are now asked to help. Upon the number and kind of the reports received depends the quality of the annual summary on plant diseases put out by the Washington office. Information can be sent either to the chief state collaborators, whose names appear in the accompanying list, or if preferred directly to the Plant Disease Survey at Washington.

In reporting, emphasis should be placed on the newer and more interesting developments of the year. R. J. H.

LOSSES FROM LEAF RUST OF WHEAT

The accompanying statement from E. B. Mains gives definite experimental evidence concerning losses from leaf rust of wheat. It gives a working basis for calculating losses when percentage of infection alone is known. The losses of 10.9 per cent for winter wheat and 24.3 per cent for spring wheat under the conditions of the experiment in Indiana are probably greater than would ordinarily be estimated. They indicate that we have probably been underestimating rather than overestimating our losses from this disease. More work of this kind is needed

not only for leaf rust but also for other diseases. It is important from the standpoint of improving methods of estimating losses.

Doctor Mains' report is as follows:

"In connection with the question of losses caused by plant diseases, you may be interested in the results which we have obtained this year at Lafayette, dusting with sulfur for the control of leaf rust. We dusted eight replicate plots of ten rod rows each of the variety Trumbull, and had a similar number of plots undusted for checks. Here at Lafayette, leaf rust was rather late in starting to develop, showing only a trace to 10 per cent at heading time. The check, however, showed from 50 to 100 per cent of rust just following blossoming and reached 75 to 100 per cent just before ripening. Five dustings were used and, although the leaf rust was not eliminated from the dusting plots, showed a trace to 35 per cent before ripening. The dusted yielded at the rate of 31.9 bushels per acre as compared with 28.4 bushels per acre of the rusted check. This, therefore, would indicate a loss of 10.9 per cent due to leaf rust.

"The results with spring wheat were much more startling. A similar series of plots were used with the variety Illinois #1. A trace of rust showed in the check when the culms were about 6 inches high, increasing to 25 to 50 per cent at blossoming, and reaching 75 to 100 per cent before ripening. The rust was held down to trace to 35 per cent in the dusted plots, a trace to 5 per cent of stem rust developing also. About 15 to 50 per cent of stem rust developed in the check just previous to ripening. The dusted yielded at the rate of 19.7 bushels per acre, while the check gave a yield of 14.9 bushels, indicating a loss of 24.3 per cent. I think that the results obtained with winter wheat probably give a good line on the situation in this vicinity."

WANTED

SPECIMENS OF LETTUCE ROOT ROT DISEASES

E. L. Felix, who is engaged in the study of the wilt and root rot diseases of lettuce occurring in New York, desires specimens of any lettuce diseases manifesting either a seedling root rot or a blackened vascular system, or both. Diseases showing such symptoms are apparently widespread, and occur in both greenhouse and field. Among them are the disease caused by Bacterium vitians, rosette due to Aplanobacter rhizoctonia, and stunt ascribed to Pythium sp. (?). According to

Felix, the seedling rot is best observed while the plants are coming up or immediately afterward, and the vascular blackening at a later stage, although both symptoms may occur together.

Specimens should be addressed to E. L. Felix, Department of Plant Pathology, Cornell University, Ithaca, New York, until April 20. After that time they should be sent to Elba, New York.

REPORTS ON LATE BLIGHT OF POTATO

Maryland: Inspection on eight farms in Howard County showed the following percentages of rot:

Variety	Percentage rot
Red Skin	25
Red Skin	10
Red Skin	5
Gold Coin	25
Red Skin	15
Green Mountain	25
Red Skin	25
Mortgage Lifter	25

(R. A. Jehle, Nov. 7)

Virginia (Elizabeth City County): Playing havoc with our late crop, reducing yield greatly. (T. W. Turner, Oct. 28)

LATE BLIGHT ROT OF CALIFORNIA TOMATOES

A report in the Division Letter of the Fruit and Vegetable Division, Bureau of Agricultural Economics, states that rot caused by the late blight organism is prevalent in California tomatoes now arriving on the markets. (Nov. 4).

TOMATO LEAF MOLD

W. A. Archer reports (Oct. 15) that Cladosporium fulvum is said to be quite destructive on greenhouse crops near Monticello, Iowa.

BLACK ROT (BACTERIUM CAMPESTRE) OF TURNIPS IN MASSACHUSETTS

"About 125 acres of turnips in Falmouth and Eastham districts of Barnstable County more or less affected. Up to 50 per cent infection in some fields. More severe in heavy than in light soil. More severe on earliest planted turnips." (Wm. Doran, Nov.)

OTHER NOTES ON VEGETABLE DISEASES

Root knot of celery (Caconema radicicola). "Several fields of celery on muck have shown nodules or knots on the roots, especially in north-central Ohio." (J. D. Wilson, Nov. 1)

Powdery mildew of bean in South Carolina. "Have recently had a complaint of damage where the only disease apparently present was a moderate infection of powdery mildew. Its damage has probably been intensified by the cooler weather now prevailing." (Ludwig, Nov. 1)

PHYTOPHTHORA ROT OF PEAR

Doran reports Phytophthora cactorum causing rot of pear from Massachusetts. This seems to be the first report from that state.

SOME SPECIMENS RECEIVED

Phytophthora infestans on potato, Elizabeth City County, Virginia, T. W. Turner, Oct. 18.

Bacterium translucens undulosum, black chaff of wheat, Fielding, Utah, M. B. Linford, July 14. Determined by Charlotte Elliott.

Caconema radicicola on dahlia tubers, Thomasville, Georgia, O. C. Boyd, Oct. 24. Det. G. Steiner.

Phyllosticta anthirrhini on snapdragon. Orono, Maine, D. Folsom. First report to Plant Disease Survey from Maine.

Septoria gladioli on gladiolus corm. Fargo, North Dakota, W. E. Brentzel, Oct. 1. Det. Freeman Weiss.